

Abstract of the Disclosure

A liquid-fuel feed fuel cell comprising a unit cell that has a structure in which an anode and a cathode are opposed with a polymer electrolyte having a proton conductivity interposed between them, a liquid fuel is supplied to the anode, and air is supplied to the cathode, or the liquid-fuel feed fuel cell comprising a cell stack where unit cells are stacked, an operation monitoring method for monitoring the operation, and an operation monitoring device are disclosed. The inventors has found out a degradation phenomenon of such a liquid-fuel feed fuel cell in which the exhausted fuel on the anode side blackens and the cell performance irreversibly degrades if the output current is excessively increased, or if the supply of air or liquid fuel is insufficient. According to the invention, to prevent such degradation phenomenon, the liquid-fuel feed fuel cell has at least one of functions of increasing the supply of air or liquid fuel, issuing an alarm, decreasing the output current, and stopping the operation of the fuel cell when it is detected that the potential between the negative and cathodes monitored for at least one cell is below a predetermined negative potential.